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| 09/634,068 | 08/08/2000 | David N. Sontag | 10001979-1 | 3576 |

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EXAMINER

SUAREZ, FELIX E

ART UNIT PAPER NUMBER

2857

DATE MAILED: 06/03/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/634,068

Applicant(s)

SONTAG ET AL.

Examiner

Felix E Suarez

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 October 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-51 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) 1-5, 7-14, 16-21, 23-25, 27-37, 39-44, 46 and 48 is/are rejected.
- 7) ☒ Claim(s) 6, 15, 22, 26, 38, 45, 47 and 49-51 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on 08 August 2000 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Drawings

1. The drawings are objected to because:

In Fig. 2, the symbols and the labels are not readable.

In Fig. 3, the symbols "101-107, 110 and 112-119" should be -301-307, 310 and 312-319-- according with the detailed description of the specification.

In Fig. 5, the symbols and the labels are not readable.

In Fig. 6, the symbols and the labels are not readable.

In Fig. 7, the symbols and the labels are not readable.

In Fig. 8, the symbols and the labels are not readable.

Correction is required.

Minor informalities

2. The disclosure is objected to because of the following informalities:

In claim 35, page 26, line 15, the symbol "j" should be -j)—.

Correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in-

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(1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effect under this subsection of a national application published under section 122(b) only if the international application designating the United States was published under Article 21(2)(a) of such treaty in the English language; or
(2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that a patent shall not be deemed filed in the United States for the purposes of this subsection based on the filing of an international application filed under the treaty defined in section 351(a).

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

3. Claims 1, 2 and 6 are rejected under 35 U.S.C. 102(e) as being unpatentable over Alexander (U.S. Patent No. 6,246,408).

With respect to claim 1, Alexander teaches in a graphical user interface of a signal measurement system, a system for enabling a user to position the signal measurement system's sample position within a data valid window by enabling direct graphical manipulation of sample positions relative to an actual data valid window on a device under test (see col. 3, lines 31-48).

With respect to claim 2, Alexander further teaches that signal measurement system is a logic analyzer (see col. 7, lines 2-14).

With respect to claim 6, Alexander further teaches that the data valid window is automatically discovered on all channels (see col. 9 line 66 to col. 10 line 3).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 2-5, 7-14, 16-21, 23-25, 27-37, 39-44, 46 and 48, are rejected under 35 U.S.C. 103(a) as being unpatentable over Alexander (U.S. Patent No. 6,246,408) in view of Nygaard et al. (U.S. Patent No 6,463,392).

With respect to claim 3, Alexander teaches all the features of the claimed invention, except that Alexander does not teach that the data valid window is a stable and transitioning regions data display.

But Nygaard et al. (hereafter Nygaard) teaches in a system for adjusting a sampling time in a logic analyzer that the stable and transition zones are advantageously used to detect the trailing and leading boundaries of a reference signal (see Nygaard col. 4 lines 34-42).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Alexander to include the stable and transition zones as taught by Nygaard, because the stable and transition zones

allows to display a reference signal from stable and transitioning regions, as desired.

With respect to claims 4, 5 and 7, Alexander teaches all the features of the claimed invention, except that Alexander does not teach that the direct graphical manipulation of sample positions is made in 100 ps increments.

But Nygaard teaches in a system for adjusting a sampling time in a logic analyzer that one may also employ a sweep search pattern in which the positive clock transitions continually incremented by a uniform step size starting at the initial sampling time until the leading and trailing boundaries are found (see Nygaard, col. 5, lines 53-66).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Alexander to include a sweep search pattern as taught by Nygaard, because the sweep search pattern allows in a positive clock transition to increment the time in a uniform step size, as desired.

With respect to claims 8 and 16, Alexander teaches all the features of the claimed invention, except that Alexander does not teach that the data valid window is displayed as a bus composite view.

But Nygaard teaches in a system for adjusting a sampling time in a logic analyzer that the logic analyzer includes an access to the data signals on the bus (see Nygaard, col. 3, lines 1-9).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Alexander to include the logic analyzer as taught by Nygaard, because the logic analyzer allows access to the data signals on the bus.

With respect to claim 9, Alexander teaches all the features of the claimed invention, except that Alexander does not teach that the composite view defines the union of all transitioning regions and the intersection of all stable regions of all signals of the represented bus.

But Nygaard teaches that the stable regions are stable in that the voltage does not fluctuate within the region itself (see Nygaard, col. 3, lines 35-47 and Fig. 2). Nygaard also teaches a transition zone in which the reference and delayed referenced signals are not equal due to transitions and/or the intersections of different voltage levels (see Nygaard, col. 4, lines 29-32 and Fig. 2).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Alexander to include the stable and transition zones as taught by Nygaard, because the stable and transition zones allows to detect the trailing and leading boundaries of the reference signals (see Nygaard, col. 4, lines 33-54 and Fig. 2).

With respect to claim 10, Alexander further teaches a sample position marker indicating the range of sample positions for the represented bus is displayed (see col. 9 line 59 to col. 10 line 13 and Fig. 3E).

With respect to claim 11, Alexander further teaches that the Graphical user interface further displays a plurality of information and control items (see col. 9 line 59 to col. 10 line 13 and Fig. 3E).

With respect to claim 12 and 42, Alexander further teaches that the plurality of information and control items comprises:

- a) a bus/signal label;
- b) a sample position time scale;
- c) a plurality of information icons;
- d) a plurality of time stamp icons;
- e) a graphical representation of a suggested sample position;
- f) a text display of the selected sample position;
- g) a plurality of sample position scroll buttons; and
- h) a legend.

(see col. 9 line 59 to col. 10 line 13 and Fig. 3E).

With respect to claim 13, 37 and 48, Alexander further teaches that the graphical selection of a stable region or a transitioning region causes a popup menu to be displayed (see col. 14, lines 39-52 and Figs. 3A-3H).

With respect to claim 14, Alexander further teaches that the popup menu comprises a list of graphically selectable options (see col. 9 line 59 to col. 10 line 13 and Figs. 3A-3H).

With respect to claim 17, Alexander further teaches that the data valid window is displayed as an individual channels view with each channel displayed individually (see col. 9 line 59 to col. 10 line 13 and Figs. 3A-3H).

With respect to claim 18 and 41, Alexander further teaches that the graphical user interface further displays a plurality of information and control items (see col. 9 line 59 to col. 10 line 13 and Figs. 3A-3H).

With respect to claim 19 and 39, Alexander further teaches said plurality of information and control items comprises:

- a) a bus/signal label;
- b) a sample position time scale;
- c) a plurality of information icons;
- d) a plurality of time stamp icons;

- e) a graphical representation of a suggested sample position;
- f) a plurality of text display of the selected sample position;
- g) a plurality of sample position scroll buttons associated with said plurality of text displays; and
- h) a legend.

(see col. 9 line 59 to col. 10 line 13 and Figs. 3A-3H)

With respect to claim 20 and 43, Alexander further teaches a plurality of information icons are graphically selectable (see col. 9 line 59 to col. 10 line 13 and Figs. 3A-3H).

With respect to claim 21 and 44, Alexander further teaches said plurality of information icons causes a text message to be displayed on said graphical user interface (see col. 9 line 59 to col. 10 line 13; col. 14, lines 39-52 and Figs. 3A-3H).

With respect to claim 23, Alexander further teaches said plurality of time stamp icons are graphically selectable (see col. 21, lines 7-37 and Figs. 3E-3H).

With respect to claim 24 and 46, Alexander further teaches said plurality of time stamp icons causes a text message to be displayed on said graphical user interface (see col. 21, lines 7-37 and Figs. 3E-3H).

With respect to claim 25, Alexander further teaches said text message contains relative measurement time information (see col. 21, lines 7-37 and Figs. 3E-3H).

With respect to claim 27, Alexander further teaches two distinct sampling positions indicators are displayed in each of said channels (see col. 15, lines 1-6).

With respect to claim 28, Alexander further teaches said two distinct sampling positions indicators represents a suggested sampling position and a second of said two distinct sampling positions represents a selected sampling position (see col. 15, lines 8-19).

With respect to claim 29, Alexander further teaches said first indicator indicates a sampling position identified by the signal measurement system as the optimal sampling position for the selected stable region (see col. 15, lines 8-19).

With respect to claim 30, Alexander further teaches said second indicator is graphically selectable and indicates a sampling position selected by the user (see col. 15, lines 8-19).

With respect to claim 31, Alexander further teaches said second indicator causes said selected sampling position to change (see col. 15, lines 21-37 and Figs. 3a-3H).

With respect to claim 32, Alexander further teaches said plurality of sample position scroll buttons are graphically selectable and selection of one of said buttons causes a corresponding selected sampling position to change (see col. 15, lines 21-37 and Figs. 3a-3H).

With respect to claims 33 and 36, Alexander further teaches that the individual channels view displays the width of the stable regions and the width of the transitioning regions for each individual channel (see col. 14, lines 39-52 and Figs. 3A-3H).

With respect to claim 34, Alexander further teaches that the individual channels view is collapsible (see col. 14, line 61 to col. 15 line 1).

With respect to claims 35 and 40, Alexander teaches in a graphical user interface of a signal measurement system, a system (or method) for enabling a user to position the signal measurement system's sample position within a data valid window by enabling direct graphical positioning of sample positions relative to an actual data valid window on a device under test, wherein:

a) the signal measurement system is a logic analyzer (see col. 7, lines 2-14);

c) the data valid window is automatically discovered on all channels (see col. 9 line 59 to col. 10 line 13 and Figs. 3A-3H);

d) the data valid window is displayed as an individual channels view with each channel displayed individually (see col. 9 line 59 to col. 10 line 13 and Figs. 3A-3H);

e) the graphical user interface further displays a plurality of information and control items (see col. 9 line 59 to col. 10 line 13 and Fig. 3E);

f) said plurality of time stamp icons are graphically selectable (see col. 9 line 59 to col. 10 line 13 and Fig. 3E);

g) two distinct sampling positions indicators are displayed in each of said channels (see col. 15, lines 1-6);

h) a first of said two distinct sampling positions indicators represents a suggested sampling position and a second of said two distinct sampling positions represents a selected sampling position (see col. 15, lines 8-19);

i) said first indicator indicates a sampling position identified by the signal measurement system as the optimal sampling position and said second indicator is graphically selectable and indicates a sampling position selected by the user (see col. 15, lines 8-19); and

j) selection of said second indicator causes said selected sampling position to change (see col. 15, lines 21-37 and Figs. 3a-3H).

Alexander does not teach:

b) the data valid window is a stable and transitioning regions data display.

But Nygaard teaches in a system for adjusting a sampling time in a logic analyzer that the stable and transition zones are advantageously used to detect the trailing and leading boundaries of a reference signal (see Nygaard col. 4 lines 34-42).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Alexander to include the stable and transition zones as taught by Nygaard, because the stable and transition zones allows to display a reference signal from stable and transitioning regions, as desired.

5. Claims 6, 15, 22, 26, 38, 45, 47 and 49-51, are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

Prior Art

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

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Tran et al. [U.S. Patent No 6,556,223] describes a communication test set that allow a user to simultaneously view and update the test results of a communications at multiple levels.

Beck et al. [U.S. Patent No 6,396,517] describes a logic analyzer.

Alexander [U.S. Patent No 6,054,984] describes a desired adjustment direction and position for the selected display element.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Felix Suarez, whose telephone number is (703) 308-4926. The examiner can normally be reached on weekdays from 8:30 a.m. to 5:00 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marc Hoff can be reached on (703) 308-1677. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7382 for regular communications and (703) 308-7382 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1782.

May 23, 2003

F.S.

